DOCUMENT RESUME

ED 107 218 IR 001 955

AUTHOR Klein, M. Frances
TITLE A Perspective on Improving the Effectiveness of Curriculum Materials.
PUB DATE 75
NOTE 13p.; Paper presented at the Annual Meeting of the National Audio-Visual Association (Las Vegas, Nevada, January 1975)

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Curriculum Planning; Decentralization; Educational Accountability; *Educational Improvement; Educational Research; Evaluation Methods; *Instructional Materials; *Instructional Media; Predictive Validity; *Summative Evaluation; Teacher Role
IDENTIFIERS Learner Verification

ABSTRACT

Possible methods of improving the effectiveness of curriculum materials are listed and analyzed. Three factors are identified as heightening concern over effectiveness: the quantity of materials available, increasing decentralization of schooling, and the accountability movement. Basic issues discussed include evaluation of learning materials, methodology to be used in improving effectiveness, improving the channels of communication among the various groups concerned with the movement, and the development of alternative models by which learning materials can be improved. (SK)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
M. Frances Klein
& AVI
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

ED107218

IR 001 955

A Perspective on Improving the Effectiveness of Curriculum Materials

M. Frances Klein

Education in the United States goes through cycles as new perspectives are placed on old ideas, and new ideas evolve out of current social pressures and concerns. The concern over the effectiveness of instructional materials is one such "new" idea which appears to be of increasing concern to many educators and to producers and distributors of instructional materials. Perhaps the basic concern over the quality of learning materials is not new, but at least three factors have contributed to the increasing impetus of what is now referred to as a "movement" in education.

One factor which has contributed to heightening the concern over the quality of learning materials is the quantity now available. This quantity provides for choices which never before have been available. Kenneth Komoski, executive director of EPIE, reports that there are currently available more than 300,000 instructional items such as games, filmstrips, films, and cassettes. Many of these are considered old, but much of this growth has occurred over the last 15 years. Prior to the 1960s, the standard learning material for all students was the textbook. This textbook was usually chosen by people with greater authority than the classroom teacher. The teacher was given the text and expected to cover it with all, or at least most, students in the classroom. The monotony of covering the text was occasionally broken up by a film or filmstrip (sometimes related

---

An article presented in Audiovisual Instruction, Vol. 20, No. 4, April, 1975 pp. 38-41 as a companion piece to the article by Wendell Shackelford in the same publication, pp. 35-38.

to the content of the text, though not always) or even more rarely, a field trip.

During the 1960s, increased financial aid from the federal government and private foundations, along with other resources, contributed to the increase in the amount of learning materials available. New content began to be found in the traditional curricular areas, and new approaches to standard content began to appear. Subject areas rarely found before in the precollegiate curriculum began to be included. (Goodlad et al., 1966; Goodlad, 1964.) Also, forms of media other than texts were used to present the content to students--films, filmstrips, transparencies, records, realia, cassettes, slides, and study prints were used. No longer was a choice among textbooks the basic curriculum decision, but choices among what content was to be included and how the content was to be presented had to be made.

Another factor increasing the current concern over the effectiveness of learning materials is the increasing decentralization of schooling. State departments of education are no longer the major agencies for the selection of learning materials. Increasingly, the local school district, the school faculty, and the teacher are having significant power over what will be the curriculum of the school and classroom and what materials will be used to implement it. The principal and teachers of a school are more likely to be concerned with specific matters dealing with how effective learning materials will be with clearly identified groups of students. Therefore, more questions can be expected to be raised about the materials and what the impact will be upon the students.

A third factor is the accountability movement in education. This is undoubtedly related to the broader social concerns of consumerism and the demand by the public that products be held accountable to the advertisement claims made about them, as Shackelford has suggested.

While Shackelford states that he has doubts about the movement to improve the effectiveness of instructional materials, I am basically quite supportive of it. There are some concerns and reservations which I have, however, and some of these I share along with Shackelford. (Some points of agreement and disagreement with Shackelford are made explicit later in this paper.) My own concerns and reservations are based on some issues which I see within the movement. Some basic issues concern what is involved in the evaluation of learning materials, the methodology to be used in improving their effectiveness, the reporting and use of data gathered about the effectiveness of materials, improving the channels of communication among the various groups directly concerned with this movement, and the development of alternative models by which learning materials can be improved. The following paragraphs enlarge upon these issues as I interpret them.

Learner verification of learning materials as a way to increase their effectiveness is becoming almost a battle cry for the movement. Factions appear to be developing both in support of and in opposition to learner verification. There is confusion over what is meant by those who use this term, and how the process is different--if at all--from the process of validation. Sometimes the two terms, verification and validation, are used interchangeably. Perhaps the confusion is due in part to the infancy

stage of conceptualization and methodology and the unsureness of some involved in the movement of what can reasonably be done and what is unreasonable to demand given the techniques, knowledge, and skills we have available. Regardless of how verification and validation evolve in their definitions, or collapse into one as the movement develops, they both seem to have at least one common characteristic: one way of improving learning materials is to put the materials in the hands of students. No matter what label is given to this procedure, it is without question one basic way in which to improve the effectiveness of learning materials. It is not, however, the only way by which curriculum and instructional materials may be improved.

There are a variety of other procedures involved in improving the effectiveness of learning materials. Analysis of the content included in the program should be conducted: Is the content accurate; factual; free from bias and stereotypes in terms of race, ethnicity, sex, and religion; and is the content relevant to the student's future and present needs? Curriculum analysis should be done: Do the materials include objectives, learning activities, and evaluation devices; are the learning activities and evaluation procedures appropriate to the objectives; and are the materials suitable for the maturity of the students? An analysis of the instructional plan of the materials should also be conducted. Attention should be paid to considerations such as what instructional methodologies are utilized; whether the teaching methods are appropriate to help the students achieve the objectives; what theory of learning is utilized; what the role of the teacher is; and what other additional resources

are needed to implement the materials.

Product development is another area of study which can contribute to the improvement of learning materials. (See, for example, the report by Eva Baker and Merlin Wittrock, Project Guidebook: The Practicum in Instructional Development.) Some major topics to be considered in this area are preparing specifications for a product, designing a protopype, and developing the product.

Shackelford mentions other criteria such as practical durability and being reflective of the objectives of the school systems. These I believe are also of significance in improving learning materials, but they are not commonly included under the learner verification label. These types of analysis, when added to the study of what happens to the materials and the students when they use the materials under specified conditions, could all make significant contributions to improving the effectiveness of learning materials.

A major issue within the field has to do with the methodology utilized in improving learning materials. Much of the work in the 1960s utilized the traditional control-experimental group design in studying the effects of materials. Some present work tends to follow similar designs. This is probably an appropriate strategy for studying some problems, but it is also likely to be inappropriate for studying other problems. Skill involving a high degree of sophistication in accurately and comprehensively describing such factors as the antecedent conditions to learning and the context variables in operation while implementing the materials may be an equally valuable strategy. A variety of antecedent conditions--such as home and community life of the child, and context variables such as

attitudes and skills of teachers and support of the administration and parents--may significantly affect learning in different ways using the same set of materials. It may be impossible to adequately control enough of the significant variables involved in learning so that materials can become the single variable to study. This would require us to search for new ways to study and improve learning materials.

Much of the data being collected today is centered upon cognitive concerns. Cognitive growth has been a long-term concern of schooling, and much research has been conducted on it. It is not, however, the only concern of schools. Materials on the market claim to have impact upon the affective growth of students as well. The methodology utilized, for example, in learner verification, may differ quite significantly as to whether cognitive skills, psychomotor skills, affective growth, or a combination of these is the major focus of the materials. Cognitive skills may more easily lend themselves to paper and pencil instruments yielding quantitative data, while affective concerns such as values, interests, and feelings may be studied more effectively through skilled observation. This would require that work done in learner verification employ an array of different types of data collection and not rely exclusively upon one type which may be better suited to other concerns. Control of variables where possible, adequate description of others, and continual exploration of new methodology for research on significant variables will be needed in the future.

Along with developments in methodology goes the need for careful

consideration of how data--including data regarding learner verification--are to be reported and used as evidence of the effectiveness of materials. The reporting of the data collected during developmental processes is as important to the movement as the collection of it. It appears that some publishers, in particular some of the members of the Educational Media Producers Council, have been and are continuing to try out their materials with students as they are being developed. Perhaps the concern now should be shifted to enlarging and improving the procedures being used. Efforts must also be devoted to studying how best to communicate the results of the efforts in a meaningful and accurate way to a variety of interested groups.

There is some concern being expressed over how the data collected and reported will be used. The publisher who can claim that his materials were verified on the largest number of students still may not have the best materials, but he may have the most glittering advertisement. To equate a large sample with a better product is not necessarily an accurate assumption.

The problem of generalizability is often raised in relation to data which the producer is expected to collect and report. With the complexities involved in the processes of learning, teaching, and the conduct of schooling, generalizability may not prove to be a very useful term. It may not be a realistic expectation to ask producers to collect and provide evidence on their materials which allow for a high predictive validity. It seems unreasonable to expect that a set of learning materials will have the same predictable results when used in an inner-city school and a

rural school; with a high socio-economic group in the suburbs of Los Angeles and in a coal mining region of West Virginia; or with a racially mixed group of 30 students and a group of five white students. Perhaps at this point in our development, a more reasonable expectation is that the publisher describe as completely as possible the samples of students utilized (using characteristics such as maturity level, sex and ethnic makeup of groups; and socio-economic status), the conditions under which the materials were used, the resulting effects of the materials upon the students, and the subsequent improvements made in the materials. This is probably a more realistic expectation for publishers than to ask them to provide statistical data which might be misinterpreted and misused.

The availability of such data will not, however, make the decision of whether the materials should be used in a given school district or classroom. A meaningful and comprehensive report from producers will give valuable data to persons who must make choices from among all of the learning materials now available. Using this data, a match must be made among the materials, the teacher who is to implement them, and the student who is to learn from them. The final decision regarding materials to be used should be a local decision and one which is thoughtfully and systematically made using a variety of data.

Another issue concerns the channels of communication among the various groups involved in improving the effectiveness of learning materials. We should avoid a "we-versus-they" stance among the researchers, producers, purchasers, and users of learning materials. The effectiveness of learning materials should be viewed as a joint concern, with each group having some

special knowledge and skills to contribute. Educators must take the time to study publisher's reports and guides, which should be included with materials. Channels of communication which cut across professional responsibility must be found so that producers, researchers, and practitioners may exchange significant data, skills, and knowledge about improving learning materials.

Finally, a variety of models must be investigated before the people involved in the movement to improve the effectiveness of learning materials accept one model to guide their activities. One model may never be adequate unless it is formulated as a broad synthesis of several varying models developed for different purposes and for different types of materials. Publishers must determine what they can realistically do, given their constraints and flexibilities. Other agencies may also make contributions. For example, EPIE, National Evaluation Systems, and the Social Science Education Consortium provide valuable data to their subscribing members and clients.

The staff of the Curriculum Inquiry Center in the Graduate School of Education at U.C.L.A. has proposed that it might function as a type of underwriter's laboratory for curriculum and instructional materials. It would not be based on the model which Shackelford cites, and apparently fears. I completely agree with him in that the process of underwriting learning materials must be different from that of underwriting a toaster or automobile. It may be, however, that certain kinds of data useful in decision-making processes can best be supplied by independent agencies rather than by the producers who hold a basic vested interest in the product.

During the months and years ahead, we should be grappling with the issues I have discussed in meaningful, productive, and creative ways as the field of evaluation of learning materials develops. Guiding all these activities should be an awareness of a constant and pervasive challenge. That challenge is to make available to the students effective learning materials which will assist in the achievement of educational goals and objectives.

For example, many educators are emphasizing the processes of inquiring, valuing, and learning how to learn as aims of education. Individualization has long been a means by which educational aims are better achieved. As individualization spreads to other areas of activity--such as evaluation and selection of objectives and learning activities--a new charge to personalize learning is heard. This will require a shift in some of the assumptions which appear to be basic to the production of many materials. Most materials on the market today appear to be developed with the assumption that they will be used with a class of 30. Perhaps an assumption basic to new materials should be that the materials will more often be used by one student and small groups of students. The kinds of goals and the means of achieving them which are being reflected by leaders in the educational community and in the community at large should function as directives and challenges to producers of learning materials.

In conclusion, I am strongly supportive of the movement to improve the effectiveness of learning materials. I do hold some basic concerns over how the movement is developing now and will develop in the future.

Unless careful consideration is given as to how the issues are analyzed and directed, the promise some of us see in the movement may go unrealized.

The choices in curriculum made available by the materials are stimulating and full of promise. I value options being available in curriculum, and would want to maintain many choices. It would be very unfortunate if rigid and unrealistic requirements on producers drastically cut down the choices in learning materials. The imposition of one arbitrary model at the state level, or regulations at the district level, for collecting and reporting data about the effectiveness of learning materials which allows for limited types of evidence could be extremely harmful if it does not allow for the kinds of flexibility suggested in this paper. If this happens, we may find ourselves with only materials which can teach the minutiae of schooling with other significant concerns being overlooked. This situation simply must be avoided. It may be avoided, however, only if we carefully analyze and evaluate what we are doing to improve learning materials and what effects our activities are having.

The development of a new area of study in improving learning materials should be viewed as a challenge and an educative process for those involved. This process should be carefully guided by the sharing of knowledge and skills by all those involved in and affected by it.

REFERENCES

Baker, Eva, and Merlin Wittrock. Project Guidebook: The Practicum in Instructional Development. Washington, D.C.: U.S. Department of Health, Education and Welfare, April 1974.

Goodlad, John I. School Curriculum Reform in the United States. New York: Fund for the Advancement of Education, 1964.

Goodlad, John I., Renata Van Stoephasius and M. Frances Klein. The Changing School Curriculum. New York: Fund for the Advancement of Education, 1966.

REFERENCED AGENCIES

Curriculum Inquiry Center, Graduate School of California, University of California, 405 Hilgard Avenue, Los Angeles, California 90024.

Educational Media Producers Council, 3150 Spring Street, Fairfax, Va. 22030.

Educational Product Information Exchange Institute (EPIE), 463 West Street, New York, N.Y. 10014.

National Evaluation Systems, P.O. Box 226, Amherst, Mass. 01002.

Social Science Education Consortium, 855 Broadway, Boulder, Colo. 80302.

M. Frances Klein, Curriculum Specialist, Director of the Curriculum Inquiry Center at the Teacher Education Laboratory, University of California, Los Angeles